

AMSAT News Service Weekly Bulletins
Issue: ANS-321
Date: 1990-11-17
Sources: amsat-ans-1990-ans-321.01.txt

SB ALL @ AMSAT \$ANS-321.01
DX-PEDITIONS A PLENTY (Pt 1)

HR AMSAT NEWS SERVICE BULLETIN 321.01 FROM AMSAT HQ
SILVER SPRING, MD NOVEMBER 17, 1990
TO ALL RADIO AMATEURS BT

Island DX-peditions should keep Satellite DXers busy

With some indispensable help from Gary Garriott, WA9FMQ, Eric Rosenberg WD3Q has been granted a reciprocal license in the Dominican Republic and will be operating as WD3Q/HI3 from Saturday, 24 November to Thursday 30 November from Puerto Plata on the north coast of the country. He expects to be on AO-13 mode J and B every day, but as this is a family holiday, one never knows whether this will actually be the case!! He is planning to be active on Thanksgiving weekend, and hopes to check into the Operations Net (145.950 MHz) on Saturday morning.

The equipment comes from Mike Crisler, N4IFD (antennas, amplifiers, preamps, feedlines, et al), and Art Feller, KB4ZJ (FT-726R radio). Mike has designed a portable mast, tripod and antenna mounting system for the small KLM twin antennas that fits in a 7 foot x 6 inch PVC pipe. Eric plans to take as many pictures as possible and will publish an article for a future issue of AMSAT Satellite Journal.

The windows for this operation are tentatively scheduled as follows:

SAT 24-NOV-1990	1400	to 1900	
SUN 25-NOV-1990	1300	1800	
MON 26-NOV-1990	1100	1630	
TUE 27-NOV-1990	1000	1500	<--
WED 28-NOV-1990	0900	1330	He may not start until 1100 UTC or so
THU 29-NOV-1990	0730	1230	<--

All dates and time are in UTC.

Those fortunate enough to work Eric can QSL to his home address of:
338 14th Street NE, Washington, DC 20002
/EX

SB ALL @ AMSAT \$ANS-321.02
DX-PEDITIONS A PLENTY (Pt 2)

HR AMSAT NEWS SERVICE BULLETIN 321.02 FROM AMSAT HQ
SILVER SPRING, MD NOVEMBER 17, 1990
TO ALL RADIO AMATEURS BT

In addition to Eric's operation, ANS has been informed of a DX-pedition to Saipan (KH0). As posted on CompuServe:

#: 32281 S5/Amateur Satellites
11-Nov-90 21:11:47
Sb: KH0 Pedi (AO-10,13)
Fm: Ken JR1WZI 74520,62
To: ALL

We are planning to operate OSCAR from KH0 (Saipan Is.) on Nov 23-25.

Oscar: A0-10, A0-13
Date & Time: Nov23 15:00 - Nov25 24:00 (UTC)
Mode & Freq: Mode-B 145.910MHz SSB
 145.870MHz CW
 Mode-J 435.950MHz SSB/CW
Rig & ant: (2m) 30W 10el YAGI
 (70cm) 50W 15el YAGI
Callsign: KH0/JR1WZI, KH0/JA0RVJ, KH0/JH1TEB, KH0/JH10GT
QSL: Buro (JARL)

73,
Ken JR1WZI

Looks like the amateur satellites are where the real DX action is ... and without the fuss of low-band style pileups.

[ANS thanks Eric Rosenberg WD3Q for the information for these bulletins]
/EX

SB ALL @ AMSAT \$ANS-321.03
RS-14/RUDAK-2 LAUNCH UPDATE

HR AMSAT NEWS SERVICE BULLETIN 321.03 FROM AMSAT HQ
SILVER SPRING, MD NOVEMBER 17, 1990
TO ALL RADIO AMATEURS BT

Revised RS-14/RUDAK-2 Launch Set For November 29, 1990 +- 1 Day

AMSAT-DL officials have been informed that the launch of RS-14/RUDAK-2 will occur on or about November 29, 1990, plus or minus one day. Also, it is not expected that the RUDAK-2 transponder will be turned on until three days after launch. Radio amateurs should not expect to hear the CW beacon from RUDAK-2 until December 1, 1990. Efforts are still under way to provide a launch net on 20M starting about an hour before launch. UA3CR requests the help of radio amateurs worldwide to help collect telemetry and send it to him via packet radio to him once the CW beacon is turned on. The CW telemetry beacon can be heard on a downlink frequency of 145.822 or 145.948 MHz SSB. At this time the exact launch window has not been announced, nor have the preliminary Keplerian elements published. Please stay tuned to AMSAT Nets and AMSAT News Service (ANS) bulletins for late breaking news concerning the launch of this exciting new OSCAR.

[ANS would like to thank DB20S for providing the information in this bulletin.]

/EX
SB ALL @ AMSAT \$ANS-321.04
W0-18 STATUS

HR AMSAT NEWS SERVICE BULLETIN 321.04 FROM AMSAT HQ
SILVER SPRING, MD NOVEMBER 17, 1990
TO ALL RADIO AMATEURS BT

Efforts To Understand W0-18 Attitude Continue; New Picture Software Uploaded

Ground controllers at Weber State University (WSU) are continuing their efforts to analyze the attitude behavior of WEBERSAT-OSCAR-18 (W0-18). They have observed over the past several months that W0-18's Z-axis spin rate has been slowly decreasing. In an effort to understand this phenomenon, the students in the Computer Science Department are building a database to store the past ten months of real-time telemetry and Whole Orbit Data (WOD) collection. This will allow engineers to retrieve data and plot telemetry parameters quickly for analysis. Storing this much data immediately presents a significant challenge in view of the enormous volumes of data involved, however, ground controllers will have valuable tool in order to characterize

spacecraft motion and health.

To cope with the slowing of the spin rate of W0-18 and to enhance picture taking, new on-board software has been uploaded to W0-18. This imaging software has the added "smarts" to look at the solar array (S/A) currents, wait for a specified S/A current, and then snap a picture. By using solar array currents, WSU engineers will use this information to predict when the CCD camera is earth pointing and thus produce better pictures.

In the upcoming weeks, new software will also be loaded to include the CCD Light Spectrometer data in the telemetry. The spectrometer is designed to measure the spectrum of sunlight reflected from the earth's atmosphere. This will provide scientist with the composition of the atmosphere at specific places and times.

Radio amateurs who wish to process W0-18 images can obtain more information about WEBERWARE 1.0 from the AMSAT Software Exchange at AMSAT-NA HQ's.

/EX

SB ALL @ AMSAT \$ANS-321.05

MICROSAT UPDATE

HR AMSAT NEWS SERVICE BULLETIN 321.05 FROM AMSAT HQ

SILVER SPRING, MD NOVEMBER 17, 1990

TO ALL RADIO AMATEURS BT

Engineering Team reports on current status of Microsats

Beta testing of the new PACSAT BBS software uncovered a minor bug which could only be discovered while the bird was being used by multiple stations. After analysis of a memory dump from A0-16, the failure mode was discovered and was reproduced on a ground-based Microsat simulator. The problem was fixed and A0-16 was scheduled to be reloaded with the new code during the weekend of 17 November 90.

The AMSAT Microsat Engineering team has generated the following update on all the Microsats dated 16 November 90:

A0-16

A0-16 is currently running the basic command and telemetry system, without the Whole Orbit Data (WOD) routines. This is in preparation for a full reload this weekend with an updated operating system. Fixes include various improvements in memory utilization, making more memory available to application programs.

This operating system will support the first production version of the file server software, loading will start this weekend. The new version will support the full 8 megabyte file system.

D0-17

No Changes. Uploading of new software is planned for December.

W0-18

The version 3.0 imaging software was unloaded 11/13/90. The 3.5 version was loaded 11/14/90. This version uses the arrays currents as well as the horizon sensors in the attitude determination algorithm. A variable timer has been added in order to allow a longer time for constraints to be met before an image capture is triggered.

LO-19

No Changes. Uploading of the pacsat file server is planned for late November.
/EX

SB ALL @ AMSAT \$ANS-321.06
S/A PROCEEDINGS PUBLISHED

HR AMSAT NEWS SERVICE BULLETIN 321.06 FROM AMSAT HQ
SILVER SPRING, MD NOVEMBER 17, 1990
TO ALL RADIO AMATEURS BT
AMSAT Argentina Satellite Symposium Proceedings Published
During the weekend of 22 September 90, AMSAT-Argentina held a Satellite
Symposium in Buenos Aires, Argentina. ANS has be informed that the
Proceedings of that meeting have been published and are now available.

The Proceedings total approximately 90 pages and based on the index of papers
included (13 in all) and because the Symposium was held in Argentina, one can
assume that the Proceedings are published in Spanish. For more information on
these papers, contact:

Carlos Calvo 1424, 1er Piso, Capital Fed.

TE: 32 0555, 26 0505.
P.O.Box 9, Suc.1, 1401 Buenos Aires. Argentina.

He can be contacted at: LW2DQO @ LU7AA.
/EX
SB ALL @ AMSAT \$ANS-321.07
ZRO TEST SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 321.07 FROM AMSAT HQ
SILVER SPRING, MD NOVEMBER 17, 1990
TO ALL RADIO AMATEURS BT

Fall Edition of ZRO Test Announced

The ZRO Memorial Technical Achievement Award Program, or just "ZRO Test" has a
new schedule through the end of 1990 via AMSAT-OSCAR-13. This activity is a
test of operating skill and equipment performance tested by copying signals
decreasing in strength in predefined steps. At the beginning of the run,
uplink power from the control station is set to match the general beacon
downlink strength. This is level "zero". The control operator will send and
repeat a random five-digit number, then lower uplink power by 3 dB (half
power) and repeat the procedure with a new random number. This will continue
to a level 27 dB below the beacon (level "nine"). A participating listener
monitors the downlink signals till they can no longer copy the numbers. Those
who can hear the beacon will qualify for the basic award by copying the code
group heard at level "zero". The challenge is to improve station performance
to a point where the lower-level downlink signals can be copied (levels 6
through 9). This then results in the need for less uplink power for routine
communications operation.

The following schedule of Mode "B" and "JL" ZRO tests were chosen for
convenient operating times and favorable squint angles. The "B" tests can be
heard on 145.840 MHz and the "JL" test on 435.945 MHz.:

Saturday November 24, 1990 at 1700 UTC "B"
Saturday December 1, 1990 at 2030 UTC "B"
Saturday December 15, 1990 at 1630 UTC "B"
Saturday December 22, 1990 at 0530 UTC "B"
Saturday December 22, 1990 at 0645 UTC "JL"

Note that the dates and times are noted in "UTC." The tests on December
22nd occur late Friday night for those in North America. Any changes will be

announced as soon as possible via the AMSAT HF and A0-13 Operations Nets as well as ANS. Recently updated ZRO brochures are available from WA5ZIB, Andy MacAllister, AMSAT V.P. User Operations, 14714 Knightsway Drive, Houston, TX 77083 for an S.A.S.E. with two units of postage. The brochure describes test procedures and means for obtaining certificates and gives some historical background about the program.

All listener reports with date of test and numbers copied should be sent to WA5ZIB at the address above. A report will be returned verifying the level of accurate reception. Good luck!

/EX

SB ALL @ AMSAT \$ANS-321.08

OPERATIONS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 321.08 FROM AMSAT HQ

SILVER SPRING, MD NOVEMBER 17, 1990

TO ALL RADIO AMATEURS BT

AMSAT-NA Operations Net Schedule Announced

AMSAT Operations Nets are planned for the following times.

Mode B nets are conducted on an A0-13 downlink frequency of 145.950.

Mode J/L nets are conducted on an A0-13 downlink frequency of 435.970.

Date	Phs	mode	UTC	NCS	Alt.	U.S. day
24 Nov 90	97	J/L	1430	WD0E	N5BF	Saturday
02 Dec 90	63	B	1530	WB6LLO	WA5ZIB	Sunday
08 Dec 90	156	B	1300	WB9ANQ	KA5SMA	Saturday
15 Dec 90	97	J/L	1400	N5BF	WD0E	Saturday

STS-37 astronaut Jay Apt (N5QWL) will be the featured guest on the 24 November 90 net. Jay will be discussing late plans for his own flight, which is to be flown next spring, and STS-35, which is scheduled for early December. This round table-interview session with N5QWL promises to be very interesting.

Nets are scheduled for North American geographic coverage and time zones although other parts of the world are often within the footprint and check-ins from everywhere are welcome. Those who don't have adequate and convenient coverage from this net are encouraged to schedule their own nets via A0-13. Write to AMSAT Headquarters or send a note to N5BF @ WB6YMH with your schedule to have it included in ANS.

For information on the amateur satellite program and how you can participate, contact AMSAT-NA Headquarters at P.O. Box 27, Washington, DC 20044, phone (301) 589-6062, or contact your local AMSAT Area Coordinator.

/EX

SB ALL @ AMSAT \$ANS-321.09

FALL A0-13 TRANSPONDER SCHED

HR AMSAT NEWS SERVICE BULLETIN 321.09 FROM AMSAT HQ

SILVER SPRING, MD NOVEMBER 17, 1990

TO ALL RADIO AMATEURS BT

The transponder schedule for A0-13 is as follows:

Mode-B :	MA 000 to MA 095
Mode-JL:	MA 095 to MA 125
Mode-LS:	MA 125 to MA 130
Mode-S :	MA 130 to MA 135
Mode-BS:	MA 135 to MA 140 <--- QRP on Mode B Please
Mode-B :	MA 140 to MA 256
Omnis :	MA 220 to MA 040

This schedule is expected to continue through 26 Dec 90.

The command team requests that you make a specific effort to use QRP on Mode B between MA 135 to 140. This is specifically to help those people experimenting with Mode S. (Although you really should always keep checking that your peak signal is never stronger than the beacon (145.813/435.651 MHz)

The spacecraft attitude of A0-13 is calculated to be:
BLON = 179.1 and BLAT = -1.5 for 19 November 90

AMSAT-OSCAR-10 has come out of hibernation and appears to be receiving sufficient solar panel illumination to support Mode-B transponder operations. The transponder may be used, carefully, at all points of the orbit except MA 254 - 006 when eclipses occur. If beacon or transponder signals show signs of FMing, users should cease all transponder use immediately.
/EX

Tad Cook
Seattle, WA
Packet: KT7H @ N7HFZ.WA.USA.NA
Phone: 206/527-4089
MCI Mail: 3288544
Telex: 6503288544 MCI UW
USENET:...uw-beaver!sumax!amc-gw!ssc!tad
or, tad@ssc.UUCP